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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TITLE: APPARATUS AND METHOD FOR ATTACHING
BARBED WIRE TO FENCE POSTS

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BACKGROUND OF THE INVENTION

1. Field of The Invention

The present invention relates to methods for attaching
barbed wire to fence posts.

2. Background Information

Assembling or repairing barbed wire fences is a tedious and time-consuming process. Barbed wire is typically attached to metal fence post using a metal apparatus known as a tie-wire. These tie-wires are placed around the fence post and barbed wire. The ends of the tie-wire are then manually twisted around the barbed wire on either side of the fence post to secure the barbed wire to the fence post. Pliers are typically used in this operation.

Using pliers to manipulate tie wires relative to barbed wire is cumbersome, and the user typically encounters several problems in the course of installing barbed wire in this manner. Pliers often slip off the tie-wire, causing possible injury, either as the motion propels the user's arm into a barb of the barbed wire, or as the pliers physically hit the user. Also, the user must remove the pliers from the tie-wire for various reasons, such as the pliers being too long and hitting the barbed wire already in place, or the placement of the fence post making it difficult for the user

1 to reach the tie-wire. When the user places the pliers back
2 on the tie-wire, in a different position, the user must take
3 care to avoid barbed wire already in place. Further still,
4 using pliers to attached barbed wire usually involves
5 switching hands, thus making it difficult to maintain
6 constant pressure and avoiding slippage (with possible
7 injury, as already mentioned).

8 The protective gloves which are virtually required for
9 carrying out the conventional barbed wire installation
10 process even further complicates the process. The gloves
11 are typically thick and bulky in order to protect the user
12 from potential harm. The protective characteristics of the
13 glove hamper the ability of the user to manipulate the
14 pliers efficiently. The gloves also make it difficult to
15 grasp and maintain hold of the pliers, which still further
16 increases the likelihood that the pliers will slip off the
17 tie-wire, causing possible injuries as previously described.

18 The problems above, while seeming insignificant when
19 taken one tie wire installation at a time, become quite
20 significant when multiplied by the number of installations
21 in a typical barbed wire fence project.

22 SUMMARY OF THE INVENTION

1 In view of the foregoing, it is an object of the
2 present invention to provide an improved method for
3 attaching barbed wire to fence posts.

4 In satisfaction of these and related objectives,
5 Applicant's present invention provides an apparatus and
6 method of use thereof that substantially simplifies and
7 accelerates the attachment of barbed wire to fence posts,
8 while still using conventional and readily available tie
9 wires. This, in turn, increases the amount of fence that
10 may be constructed or repaired in a single day, as well as
11 prevents injuries associated with present methods involving
12 the use of pliers and similar tools.

13 BRIEF DESCRIPTION OF THE DRAWINGS

14 FIG. 1 shows the screwdriver-like apparatus

15 FIGS. 2-7 show the step-by-step process of attaching
16 the tie-wire to the fence post using the apparatus of the
17 present invention.

18 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

19 Referring to Fig. 1 the tie-wire attachment apparatus 5
20 comprises handle 10 and receiving end 15. The preferred
21 embodiment of handle 10 is a substantially cylindrical
22 segment comprising a light material such as plastic or wood
23 (although other materials may be substituted, with

1 durability and manufacturing costs being the primary
2 considerations).

3 Handle 10 allows a user to easily grasp and maintain
4 hold of the apparatus 5. Handle 10 is attached to a
5 receiver rod 15 at handle front end 8. Receiver rod 15 is a
6 solid cylindrical structure that attaches to handle 10 at
7 handle end 17, and includes a receiving tip 20 at its front
8 end 22. The preferred embodiment of receiver rod 15 consists
9 of a solid metal cylinder that is greater in diameter than a
10 conventional tie-wire 30. Metal is preferred because of the
11 added strength and durability it provides.

12 Receiving tip 20 includes a cylindrical recess 24
13 coaxially centered with the long axis of receiver rod 15,
14 and is located at front receiving end 22. Recess 24 is
15 slightly greater in diameter than that of a conventional
16 tie-wire 30, thereby allowing an end of tie wire 30 to be
17 received within recess 24.

18 Recess 24 is formed with a depth that allows it to
19 receive a length of tie-wire 30 sufficient to provide
20 effective engagement between apparatus 5 and tie wire 30,
21 for the required manipulations of tie wire 30 (to be
22 described hereafter), yet short enough to allow for the

1 terminal end of the tie-wire 30 to be tightly wrapped around
2 barbed wire 50.

3 Figs. 2 through 6 show a progression of the attachment
4 of tie-wire 30 to barbed wire 50 using tie-wire attachment
5 apparatus 5.

6 Referring to Fig. 2, tie-wire 30 is placed around fence
7 post 55 with tie-wire first terminal segment 35 and second
8 terminal segment 40 placed in front of barbed wire 50.

9 Referring to Fig 3, recess 24 of receiving tip 20 is
10 placed onto first terminal segment 35, by inserting first
11 terminal segment 35 into receiving tip 20 to the point where
12 the first terminal segment 35 can be inserted no further.

13 Referring to Fig 3 - 5 tie-wire attachment apparatus 5
14 is manipulated in such a manner as to encircle barbed wire
15 50 until substantially the entire tie-wire terminal segment
16 35 is wrapped completely around barbed wire 50. During the
17 manipulation, receiving tip 20 should continually be engaged
18 with tie wire 30 to the greatest extent possible, after
19 which tie-wire attachment apparatus 5 is removed from first
20 terminus segment 35.

21 Receiving tip 20 is next engaged with the second
22 terminal segment 40 of tie wire 30, by inserting second
23 terminal segment 40 into recess 24 to the point where the

1 second terminal segment 40 can be inserted no further.
2 Tie-wire attachment apparatus 5 is manipulated in such a
3 manner as to encircle barbed wire 50 until the entire
4 tie-wire second terminal segment 40 is wrapped substantially
5 completely around barbed wire 50, after which tie-wire
6 attachment apparatus 5 is removed from second terminal
7 segment 40.

8 As shown in Fig. 7, after the above operations,
9 tie-wire 30 is completely engaged with barbed wire 50,
10 holding barbed wire 50 tightly in place relative to fence
11 post 55.

12 Experience teaches that the above apparatus and method
13 provide for considerably faster fence erection times and far
14 fewer opportunities for injury to workers.

15 Although the invention has been described with
16 reference to specific embodiments, this description is not
17 meant to be construed in a limited sense. Various
18 modifications of the disclosed embodiments, as well as
19 alternative embodiments of the inventions will become
20 apparent to persons skilled in the art upon reference to the
21 description of the invention. It is, therefore,
22 contemplated that the appended claims will cover such
23 modifications that fall within the scope of the invention.